REMARKS/ARGUMENTS

Claims 1-26 are pending in the application. Reconsideration in view the following remarks is respectfully requested.

Claims 1-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al. ("Wang"), "Highly Accurate Data Value Prediction using Hybrid Predictors". The oath/declaration, title and claim 13 are objected to. A proper oath/declaration is attached herewith. The title and claim 13 are amended to overcome the objections. Claim 1 is also amended for clarification purposes.

Applicant respectfully submits that the cited reference does not teach, suggest or disclose: "[a] method for predicting values in a processor having a plurality of prediction modes, comprising: receiving an instruction at a first table; generating a valid signal from said first table; providing a prediction mode for said instruction; determining a hit in a second table, said second table to provide a prediction value, said hit in the second table being determined according to a function of said instruction and said first table; and predicting the predicted value according to said hit and said prediction mode" (e.g., as recited in amended claim 1).

The Office Action asserts that the limitation "...determining a hit in a second table according to a function of said instruction and said first table" of claim 1 can be found in Figure 6 and Section 5.2 of Wang. Specifically, the Office Action asserts that PHT is the 2nd table where a hit is determined according to a function of said instruction and said first table.

Section 5.2 of Wang states:

> The second hybrid predictor that we investigate combines a 2-level predictor and a stride-based predictor. Figure 6 shows the block diagram of this hybrid

predictor. Compared to the VHT of the 2-level predictor, this hybrid predictor's VHT entry has two additional fields-State and Stride. This hybrid predictor works as follows. When a prediction is to be made for an instruction, the appropriate VHT entry is selected, and its Tag field checked as before. In parallel, the Value History Pattern and the State fields are read out for the 2-level predictor and the stride-based predictor. The 2-level predictor makes a prediction *if the maximum count value in the selected PHT entry is greater than the specified threshold value.* If the 2-level predictor makes a prediction, then that value is selected as the hybrid predictor's prediction. If the 2-level predictor does not make a prediction, then the value predicted (if any) by the stride-based predictor is selected" (emphasis added).

As specifically disclosed in the section above, it is clear that the purpose of the PHT disclosed in Wang is to determine *whether the 2-level predictor is to generate* a predictor value. This is affirmed by Figure 6, which illustrates the values that are compared to determine whether the maximum count value in the selected PHT entry is greater than the specified threshold value.

Applicants submit that the PHT table in Wang is not capable of "...determining a hit in a second table, said second table *to provide a prediction value,* said hit in the second table being determined according to a function of said instruction and said first table..." (e.g., as recited in amended claim 1 – emphasis added). Similar limitations are found in claim 13, which states: "...a second table indexed by a function of said instruction pointer and said first table; and a hit condition in said second table *that correlates to a predicted value* of a prediction mode" (emphasis added). Also, claim 19 states: "...a set of predicted values for said set of instructions, *said set of predicted values* stored in said first table *and said second table*" (emphasis added). Lastly, claim 24 states: "a second table indexed by the calculated pointer and *having second table entries having second prediction result fields...*" (emphasis added).

Support for the storage of predicted values in the second table (unlike the PHT table of Wang) can be found throughout the specification. For example, at line 3 of page 6: "[n]ext value table 124 may be indexed by PIP table 122 data and the received instruction as a result of valid signal 126. Depending on the information and data, prediction value 128 is provided by either PIP table 122 or next value table 124. The predicted values correlate to the instructions from fetch unit 110 received at multi-mode predictor 120. If an instruction does not correlate to a predicted value, valid signal 126 will not be provided, and a miss condition noted. *The predicted value is selected from PIP table 122 or next value table 124 and is provided as predicted value 128*" (emphasis added). Also, page 8 line 27 (describing Figure 2b) states: "[e]mbodiments of the present invention may index next value table 204 with fixed function 220.[Box 262] Fixed function 220 receives inputs from instruction pointer 206 and PIP table 202. Embodiments of the present invention may determine if a hit occurs in the next value table 204. [Box 264] A hit would occur if the index value from fixed function 220 matches an entry in tag field 222 of next value table 204. If yes, then embodiments of the present invention may select predicted value 230 to be the value within next value field 224 corresponding with the indexed value of fixed function 220. [Box 266]".

Since each and every element of independent claim 1 is not taught, suggested or disclosed by the cited reference, the 102(b) rejection is lacking and should be withdrawn. Independent claims 13, 19, and 24 contain substantively similar limitations and therefore should be allowed as well. Claims 2-12, 14-18, 20-23 and 25-26 depend from the aforementioned allowable independent claims, and therefore are in condition for allowance as well.
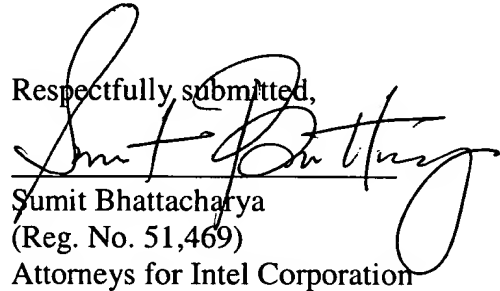
For at least all the above reasons, the Applicants respectfully submit that this application is in condition for allowance. A Notice of Allowance is earnestly solicited.

The Examiner is invited to contact the undersigned at (408) 975-7500 to discuss any matter concerning this application. The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. **11-0600**.

Respectfully submitted,

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